APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,217	02/19/2004	Kevin Nolish	FORE-107	5328

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EXAMINER
MEHRMANESH, ELMIRA

ART UNIT	PAPER NUMBER
2113	

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>19 February 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *June 18 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

The application of Nolish et al., for a "Method, apparatus and software for preventing switch failures in the presence of faults" filed February 19, 2004, has been examined.

Claims 1-19 are presented for examination.

Claims 8-19 are rejected under 35 USC § 101.

Claims 1-19 are rejected under 35 USC § 102.

Claim Rejections - 35 USC § 101

Claims 8-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Software programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Dunn et al. (U.S. Patent No. 6,735,720).

As per claim 1, Dunn discloses a switch for transferring data comprising: at least one master unit (col. 10, lines 38-40) a plurality of slave units (col. 10, lines 47-53)

a bus through which the master unit communicates with the slave units (col. 10, lines 38-40)

a memory (col. 4, lines 4-17) in communication with the master unit having a software program which causes the switch to automatically recover when a slave unit fails (Fig. 6, element 615) and (col. 9, lines 23-26).

As per claim 2, Dunn discloses a switch including persistent storage that survives across abnormal termination of the switch (Fig. 4, element 14-18).

As per claim 3, Dunn discloses a switch including a mechanism for detecting failures of the slave units and thereupon causes the switch to abnormally terminate (Fig. 6, element 600).

As per claim 4, Dunn discloses software program causes the switch to automatically recover when the detecting mechanism causes the switch to abnormally terminate (Fig. 6, element 615).

As per claim 5, Dunn discloses the detecting mechanism includes a hardware watchdog device (Fig. 4 and Fig. 5, element 520).

As per claim 6, Dunn discloses a method for transferring data comprising the steps of: attempting to access a failed slave unit of a plurality of slave units of a switch by a master unit of the switch with a signal through a bus through which the master unit and the failed slave unit communicate (Fig. 5, elements 520, 540)

automatically recovering the switch from the failed slave unit with a software program (Fig. 6, element 615) in the switch that directs the master unit to avoid further accessing the failed slave unit of the plurality of slayer units (Fig. 6, elements 605, 610).

As per claim 7, Dunn discloses the recovering step includes the step of obtaining status information about the slave units from persistent storage (Fig. 5, element 510).

As per claim 8, Dunn discloses a software program comprising the steps of: identifying a first slave unit of a plurality of slave units of a switch has failed when the first slave unit is attempted to be accessed by a master unit of the switch (Fig. 5, elements 520, 540).

preventing a master unit from attempting to access the failed first slave unit (Fig. 6, elements 605, 610).

As per claim 9, Dunn discloses the step of determining the switch abnormally terminated when the master unit attempted to access the first slave unit (Fig. 5, element 520).

As per claim 10, Dunn discloses the step of changing information in persistent storage associated with the first slave unit from identified as failed (Fig. 5, elements 505, 510) to identified as good if the switch does not terminate abnormally after the master unit attempts to contact the slave unit (Fig. 6, element 635).

As per claim 11, Dunn discloses the step of setting a variable slot chosen from amongst a plurality of slots of the switch not marked as potentially bad (Fig. 6, element 605).

As per claim 12, Dunn discloses the step of determining whether the first slave unit is physically present in a first slot of the plurality of slots (Fig. 5, element 530).

As per claim 13, Dunn discloses the step of determining the first slot is marked to be skipped (Fig. 6, element 605).

As per claim 14, Dunn discloses the step of marking the variable slot as potentially bad if it is not marked potentially bad (Fig. 6, element 605).

As per claim 15, Dunn discloses the step of reporting the variable slot as containing broken hardware and preventing the master unit from attempting to access the variable slot if the variable slot is marked to be skipped (Fig. 6, elements 605, 610).

As per claim 16, Dunn discloses the step of attempting to access hardware present in the variable slot if the variable slot is marked potentially bad (Fig. 6, element 605).

As per claim 17, Dunn discloses the step of marking the variable slot as good if the switch did not abnormally terminate when the master unit accessed the first slave unit (Fig. 6).

As per claim 18, Dunn discloses the step of enabling normal operations on hardware present in the variable slot if the variable slot is marked as good (Fig. 6, elements 635, 640).

As per claim 19, Dunn discloses the step of setting the variable slot to a next slot of the plurality of slots (Fig. 6, element 605).

Related Prior Art

The following prior art is considered to be pertinent to applicant's invention, but

nor relied upon for claim analysis conducted above.

Sicola et al. (U.S. Patent No. 6,601,187), "System for data replication using

redundant pairs of storage controllers, fibre channel fabrics and links therebetween".

Lubbers et al. (U.S. PGPUB 20030188233), "System and method for automatic

site failover in a storage area network".

Culley et al. (U.S. Patent No. 6,000,040), "Method and apparatus for diagnosing

fault states in a computer system".

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Elmira Mehrmanesh whose telephone number is (571)

272-5531. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Robert W. Beausoliel can be reached on (571) 272-3645. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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Business Center (EBC) at 866-217-9197 (toll-free).

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